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FBI Laboratory

LABORATORY REPORT

To: Christian C. Hull
Miami

Date: September 23, 2024

Case ID No.: [REDACTED]

Lab No.: 2024-02020-6
2024-02020-18

Communication(s):

Agency Reference(s): [REDACTED]

Subject(s):

Victim(s):

Discipline(s): Firearms/Toolmarks

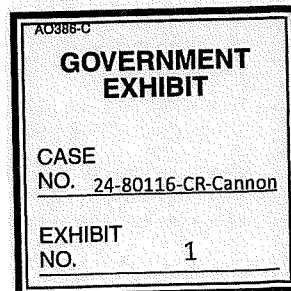
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FBI Laboratory Evidence Designator(s):

- Item 1 Rifle, serial number obliterated, from south barrier of property near Hole 5 (1B94, E7394317; Item 5)
- Item 1-2 Scope from Item 1 Rifle (1B94, E7394317; Item 5)
- Item 2 Magazine from Item 1 Rifle (1B95, E7394318; Item 5A)
- Item 3 Cartridges from Item 2 Magazine (1B95, E7394318; Item 5A)
- Item 4 Cartridge from Item 1 Rifle (1B96, E7394319; Item 5B)
- Item 41 Pistol with light from Agent R [REDACTED] (1B131, E7394328; Item 1)
- Item 42 Magazine from Item 41 Pistol (1B132, E7394329; Item 1B)
- Item 43 Cartridges from Item 42 Magazine (1B132, E7394329; Item 1C)
- Item 44 Cartridge from Item 41 Pistol (1B132, E7394329; Item 1A)
- Item 45 Magazine from Agent (1B133, E7394330; Item 2)
- Item 46 Cartridges from Item 45 Magazine (1B133, E7394330; Item 2A)

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Item 47	Magazine from Agent (1B134, E7394331; Item 3)
Item 48	Cartridges from Item 47 Magazine (1B134, E7394331; Item 3A)
Item 52	FTU Secondary Evidence (6 bullets, 10 cartridge cases, 2 casts)
Item 115	Cartridge case from glove box in Quadrant B of 2007 Nissan Xterra (1B10, E8395586)
Item 130	Cartridge case from trail area on north side of south barrier of property near Hole 6 (1B116, E7394301; Item 23)
Item 131	Cartridge case from south barrier of property near southeast corner (1B119, E7394304; Item 27)
Item 132	Cartridge case from near grass line at south barrier of property near southeast corner (1B121, E7394306; Item 29)
Item 133	Bullet from south barrier of property near southeast corner (1B126, E7394311; Item 34)
Item 134	Bullet from south barrier of property near southeast corner (1B127, E7394312; Item 35)

The results of the firearms and serial number restoration examinations and national database searches are included in this report.

Results of Examinations:

Firearms

Item 1 is a 7.62x39mm Norinco (Importer Poly USA) semi-automatic rifle, Model SKS, with obliterated serial number which functioned normally when tested in the Laboratory using the Item 2 magazine. Item 1-2 is a Crimson Trace scope with the magnification listed as 3-9x40.

Item 41 is a 9x19mm (9mm Luger) Glock pistol, Model 19 Gen 5, Serial Number DHS207123 which functioned normally when tested in the Laboratory using the Items 42, 45, and 47 magazines.

Serial Number Restoration

Examination and processing of the obliterated serial number on the Item 1 rifle restored the serial number to read "23004119 *". The asterisk represents a character that was partially restored and could be a "T", "F", "P", "Y", or "I". Additionally, obliterated numbers on the bolt carrier and the trigger guard for the Item 1 rifle were examined and processed and were restored to read "004119".

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Bullets

Items 133 and 134 are .38 caliber (which includes 9mm) copper jacketed hollow point bullets that were fired from a Glock Marksman Barrel (GMB) rifled with six grooves, right twist. The Item 133 bullet has no marks of value for comparison purposes. The Item 134 bullet was identified as having been fired from the barrel of the Item 41 pistol.

Cartridge Cases

Item 115 is a .45 Colt/.45 Long Colt caliber cartridge case that bears the headstamp of Hornady ammunition. Item 115 cartridge case has an irregular firing pin impression which is not consistent with commercially manufactured firing pins. It is possible this firing pin impression was produced by a handmade firing pin.

Items 130 through 132 consist of three 9x19mm (9mm Luger) cartridge cases that bear the headstamp of Speer ammunition and were identified as having been fired in the Item 41 pistol.

Ammunition

Items 3 and 4 consist of twenty 7.62x39mm cartridges loaded with steel copper washed jacketed bullets that bear the headstamp of Tulammo ammunition and are physically consistent with functional ammunition.

Items 43, 46, and 48 consist of forty-two 9mm Luger cartridges loaded with copper jacketed hollow point bullets that bear the headstamps of Speer and Hornady ammunition and are physically consistent with functional ammunition.

NIBIN

Images of a test-fired specimen from the Item 1 rifle were entered into the National Integrated Ballistic Information Network (NIBIN) and searched within the zone that includes Florida and Nationally. No associations were found at this time.

A NIBIN search was not conducted for Item 115 due to revolver-type cartridge case images not being entered into the database.

Methods:

Physical and Visual Examination

Physical and visual examinations compare the observable features and class characteristics of evidence items. A conclusion of "physically consistent with" is reached if the observable features or measurable dimensions and/or design features of two items are in agreement or are "physically consistent." If these dimensions and features are clearly different,

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an elimination conclusion is reached. If there is a lack of observable features or measurable dimensions, the result is inconclusive.

Firearms Function

The make, model, and caliber of a firearm are determined by directly observing manufacturer markings on the firearm in question. When markings are not present, published materials and reference collection firearms may be used to make determinations. Note any pertinent observations such as damage, modifications, improper assembly, accessories, missing parts, broken parts, or defects. Determine if the firearm is suitable for test firing and if so, what test firing methods are appropriate. The firearm is test fired in the received configuration and condition, using appropriate ammunition for case circumstances, and in a manner that determines the functionality of a firearm.

NIBIN

When a NIBIN entry is performed for a submitted firearm, an image of a test-fired cartridge case from that firearm is entered in the NIBIN database. An image of a representative sample of any submitted cartridge cases that have not been associated with a specific firearm are also entered in the NIBIN system. Entries are searched against the appropriate regional database(s), and correlation results are viewed to determine possible associations.

Pattern Examination

Toolmarks, whether they are present on evidence items or secondary evidence created in the Laboratory, undergo two stages of comparison. First, the class characteristics are examined and compared. If the class characteristics of the toolmarks are not clearly different, the examination moves to a second stage using comparative microscopy.

Comparative examinations of the impressed and striated toolmarks, in at least two items, are conducted to determine if patterns of similarity exist. At the completion of these comparisons, one of the following three opinions is issued:

1) Source Exclusion

Source exclusion is an Examiner's conclusion that two toolmarks did not originate from the same source. This conclusion is an Examiner's opinion that the observed difference(s) in class characteristics provides extremely strong support for the proposition that the two toolmarks came from different sources and extremely weak or no support for the proposition that the two toolmarks came from the same source. A source exclusion based on a minor difference in measured class characteristics requires a verification.

2) Source Identification

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Source identification is an Examiner's conclusion that two toolmarks originated from the same source. This conclusion is an Examiner's opinion that all observed class characteristics are in agreement and the quality and quantity of corresponding individual characteristics is such that the Examiner would not expect to find that same combination of individual characteristics repeated in another source. The basis for a source identification conclusion is an Examiner's opinion that the observed class characteristics and corresponding individual characteristics provide extremely strong support for the proposition that the two toolmarks originated from the same source and extremely weak support for the proposition that the two toolmarks originated from different sources. A source identification requires a verification and is the Examiner's opinion that the probability that the two toolmarks were made by different sources is so small that it is negligible.

3) Inconclusive

Inconclusive is an Examiner's conclusion that all observed class characteristics are in agreement but there is insufficient quality and/or quantity of corresponding individual characteristics such that the Examiner is unable to identify or exclude the two toolmarks as having originated from the same source. This conclusion is an Examiner's opinion that there is an insufficient quality and/or quantity of individual characteristics to identify or exclude. Reasons for an inconclusive conclusion include the presence of microscopic similarity that is insufficient to form the conclusion of source identification, or a lack of any observed microscopic similarity.

Serial Number Restoration

Magnetic, thermal, and chemical methods may be used for the restoration of serial numbers. Conclusions regarding restored characters are made by visual examination of the restored surface under a variety of lighting conditions. Information regarding the alpha-numeric structure or the general location of serial numbers is obtained when necessary from reference sources or from firearms in the Laboratory's Reference Firearms Collection.

Limitations:Physical and Visual Examination

A Physical and Visual examination is unsuitable for determining a source identification conclusion. A conclusion of "physically consistent with" signifies a restricted group source, based on class characteristics and/or observable features, from which evidence may have originated. Post-manufacture features cannot be used for elimination purposes.

Firearms Function

Function testing results describe the operability of a firearm in its current configuration and does not address the statutory requirements regarding criteria for firearms classification.

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Due to several variables regarding image capture and data entry, NIBIN searches may not always locate entries that were fired in the same firearm. Additionally, the NIBIN algorithm merely provides a sorting capability for potentially associated toolmarks represented on cartridge cases and provides no statistical confidence in possible matching results.

Pattern Examination

Firearms/Toolmark Identification is an empirical science that relies on objective measurements and a subjective comparison of microscopic marks of value. Due to variations in substrate, changes in tool working surfaces from wear, corrosion, subclass, damage, or the employment of unusual tool/work piece orientations, toolmark reproduction may be incomplete or insufficient, as a result it may not be possible for an examiner to reach a source conclusion. Additionally, some tool manufacturing methods routinely produce working surfaces that leave limited microscopic marks of value. Damaged, corroded, or fragmented items may be of little or no value for comparison purposes.

Virtual Comparison Microscopy

Virtual Comparison Microscopy (VCM) is restricted to the surface that a three-dimensional toolmark topographical instrument is capable of measuring to produce a digital reproduction. Additionally, individual characteristics may be present on the evidentiary item but may not be reproduced during a scan. This may be due to interference from lacquer/sealant, environmental damage, debris, or measuring limits for an instrument. Furthermore, physical characteristics that are not measurable, such as the metallic qualities of an item, may not be available for evaluation in the digital reproduction.

Serial Number Restoration

Except for the magnetic method, serial number restoration is a destructive examination and it is possible that the obtained results may not be reproduced in any subsequent examinations. Restored serial numbers are sometimes only visible during a portion of the reconstruction process, and are not necessarily visible at the conclusion of the process.

Remarks:

For questions about the content of this report, please contact Forensic Examiner Erich D. Smith at [REDACTED]

For questions about the status of your submission, including any remaining forensic examinations, please contact Erin E. Farais at [REDACTED]

The evidence, which includes secondary evidence, will be returned under separate cover. This report conforms to the "Department of Justice Uniform Language for Testimony and reports for the Forensic Firearms/Toolmarks Discipline - Pattern Examinations".

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This report contains the opinions and interpretations of the issuing examiner(s) and is supported by records retained in the FBI Laboratory files. Please allow a minimum of thirty days from the date of a discovery request for the FBI Laboratory to provide the related materials.

The FBI cannot ensure timely delivery of discovery requests received in less time. The work described in this report was conducted at the Quantico Laboratory.

Erich D. Smith
Firearms/Toolmarks Unit

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